Translation

PCT/DE2003/003793

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P16452WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/DE2003/003793	International filing date (*day/month/year*) 17 November 2003 (17.11.2003)	Priority date (*day/month/year*)
International Patent Classification (IPC) or national classification and IPC G05B 19/05		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☐ *(sent to the applicant and to the International Bureau)* a total of _____ sheets, as follows:

      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

   ☒ Box No. I Basis of the report
   ☐ Box No. II Priority
   ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   ☐ Box No. IV Lack of unity of invention
   ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   ☐ Box No. VI Certain documents cited
   ☐ Box No. VII Certain defects in the international application
   ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 07 April 2004 (07.04.2004)	Date of completion of this report 12 December 2005 (12.12.2005)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/DE2003/003793

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ The international application as originally filed/furnished

☒ the description:

pages 1-10, as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☒ the claims:

pages 1-8, as originally filed/furnished
pages* _____, as amended (together with any statement) under Article 19
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☒ the drawings:

pages 1/1, as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing *(specify)*: _____
- ☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing *(specify)*: _____
- ☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims		YES
	Claims	1-8	NO
Inventive step (IS)	Claims		YES
	Claims	1-8	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: US-A-4 872 106 (SLATER BILLY R), 3 October 1989 (1989-10-03)

D2: DE 196 24 302 A (SIEMENS AG), 2 January 1998 (1998-01-02)

D3: WO 01/88711 A (VAETH JOACHIM; SIEMENS AG (DE)), 22 November 2001 (2001-11-22)

D4: US-A-4 581 701 (HESS WILFRIED ET AL), 8 April 1986 (1986-04-08)

2. The aforementioned documents relate to the same technical field as the present application and deal with the same aspects of the implementation of a redundant automation system as the independent claims in the present application.

3. The application fails to meet the requirements of PCT Article 33(2) because the subject matter of claims 1 to 8 is not novel over the prior art as defined in the Regulations (PCT Rule 64.1 to 64.3).

3.1 Independent claim 1

Document **D1** discloses a redundant automation system which is suitable for controlling an industrial installation (*column 1, lines 11 to 16, and figures 1 and 2*), comprising

at least two automation devices (*column 3, lines 22 to 32, and figures 1 and 2*), the first automation device being a master automation device (*"primary processor" in D1; see column 3, line 35, and figure 2*) and the second automation device being a stand-by automation device (*"back-up processor" in D1; see column 4, line 58, and figure 2*), having:

- a memory unit which is assigned to the at least two automation devices and can store data relating to the condition of the automation devices (*"dual ported memory 46" in D1; see column 5, line 60 to column 6, line 5, and figure 2*),
- the memory unit comprising a common memory region that can be written to and read by the at least two automation devices, so that the data in the said memory region is available to the automation devices in parallel (*implicitly suggested in D1; see, for example, column 2, lines 1 to 4, and column 6, lines 39 to 64*).

All the structural elements of the equipment according to claim 1 are also disclosed in document **D2** (*column 3, line 54 to column 4, line 55, and figure 1*).

It is also noted that on account of the broad wording of claim 1, other documents such as **D3** (*page 14, line 34 to page 19, line 7, and figures 1 to 3*) and **D4** (*column 3, line 9 to column 5, line 44, and figure 1*) can also be regarded as prejudicial to the novelty of claim 1.

3.2 Independent claim 5

The method defined in claim 5 for operating a redundant automation system cannot be considered novel because the claimed features are the equivalents of device features in claim 1 that were found to lack novelty. The argument concerning lack of novelty is therefore the same as for claim 1.

3.3 Dependent claims 2 to 4 and 6 to 8

The additional features specified in these claims are likewise either directly known from or implicit in D1, and cannot therefore be considered novel. For example, regarding claims 2 and 6, D1 discloses (*column 5, lines 46 to 59*) a monitoring module (*"real time executor 14" in D1*) that monitors the operation of the master automation device.

4. The application relates to a redundant automation system for controlling an industrial installation, and to a method for operating an automation system of this type. The invention is therefore industrially applicable.